

3 1953 Aberrations of British Geometridae

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PLATE XII.

The following aberrations with one exception are in the Rothschild-Cockayne-Kettlewell collection in the British Museum.

Lyncometra ocellata Linnaeus ab. **divisa** ab. nov.

The median band of the fore wing is divided into two parts, a costal and an inner marginal one.

Type ♂ : Caterham, Surrey, ix. 1892. Rothschild coll.

Lyncometra ocellata Linnaeus ab. **costimacula** ab. nov.

Only the costal part of the median band of the fore wing remains.

Type ♂ : Loc. incog. (Farn and Pether coll.) Cockayne coll.

Plemyria rubiginata Schiffermüller ab. **albovittata** ab. nov. (Fig. 8.)

That part of the fore wing which lies external to the median area is smoky grey, but the part between the basal and median areas is pure white. The hind wing is very pale grey with a dark border.

Type ♂ : Arran, 1893. R. Adkin coll.

Chloroclysta siterata Hufnagel ab. **caerulata** ab. nov.

The usual olive green of the ground colour and markings is replaced by blue green.

♀ : Scarborough, Yorks., bred xi.1902 by H. W. Head. (W. F. Urwick coll. Vauncey Harpur Crewe coll.) Rothschild coll.

Chloroclysta siterata Hufnagel ab. **trivirgata** ab. nov.

The normal *siterata* has blackish antemedian and postmedian lines and parallel with each of them is a thin toothed li., similarly in the basal area there is a thin line parallel with the basal line; between each pair of lines the ground colour is normal. In this aberration the space between each of these three sets of parallel lines is filled with blackish green forming three dark bands across the fore wing. On the hind wing there is a dark band limited externally by the postmedian line.

Type ♀ : New Forest, 1901. Cockayne coll.

Paratype ♀ : Loc. incog. x.1897. A. Ford. Cockayne coll.

Dysstroma citrata Linnaeus ssp. *pythonissata* Millière ab. **aurantiaca** ab. nov.

All the markings of the forewing are clear orange on a pale orange ground. The hind wing is a very pale orange with a somewhat darker orange border and fringe. The thorax and abdomen are orange.

Type ♂ : Haroldswick, Unst, Shetland. (Farn coll.) Cockayne coll.

Xanthorhoe munitata Hübner ab. **defasciata** ab. nov. (Fig. 9.)

The median area of the fore wing is bounded by the dark antemedian and postmedian lines, but there is no dark median band, the ground colour of the median area being the same as that of the rest of the wing.

Type ♂ : Mickle Fell, 18.vii.1897, L. B. Prout. Cockayne coll.

Paratypes 4 ♂ : 1 ♂ Aberdeen, 1908, A. Horne. Cockayne coll. : 1 ♂ Curtobur, 23.vii.1898. Cockayne coll. : 1 ♂ Hawick, 1907, W. Renton. Bankes coll. : 1 ♂ 1886. (Sang coll.) Bankes coll.

Xanthorhoë fluctuata Linnaeus ab. **fumata** ab. nov.

The whole insect, head, thorax, abdomen, and both fore and hind wing are a uniform dark smoky colour. On the fore wing the dark basal and median markings are present, the subapical mark is indistinct, and the usual wavy lines are obsolete.

Type ♂: Bexley, bred 1911 by L. W. Newman. Rothschild coll.

Paratype ♂: Loc. incog. Stevens sale no. 15230. Cockayne coll.

This melanic form is very different from ab. *neapolisata* Millière and *thulei* Prout.

Xanthorhoë fluctuata Linnaeus ab. **costijuncta** ab. nov. (Fig. 11.)

On the fore wing the basal and median areas are united along the costa by a dark stripe.

Type ♀: Colchester, Essex, 1911. R. Adkin coll.

The type shows other unusual characters. On the fore wing the median area is very dark and is broken between nervures 1 and 2, the

EXPLANATION OF PLATE XII.

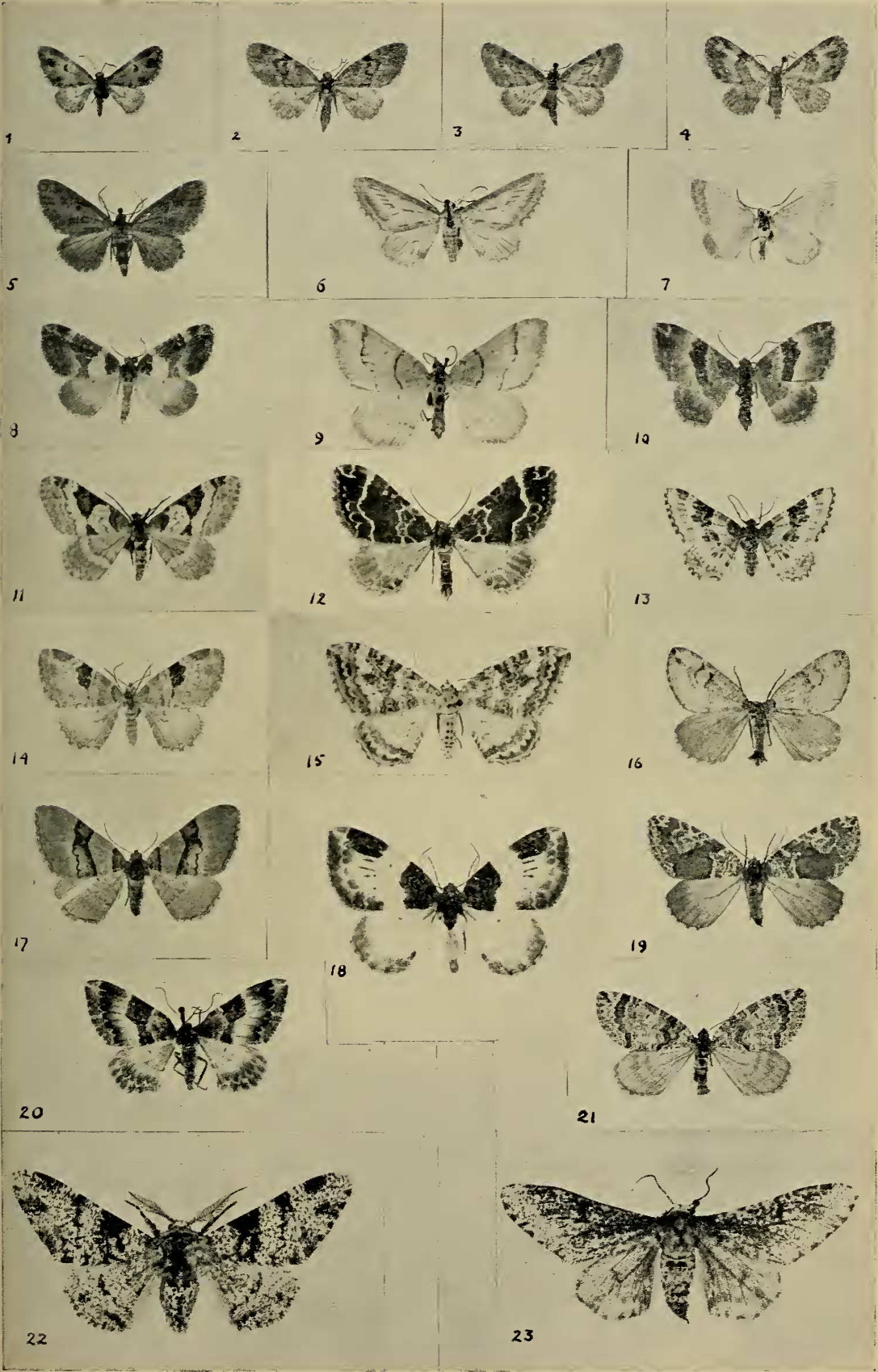
- Fig. 1. *Eupithecia linariata* ab. *punctata*. ♂. Type.
 Fig. 2. *Eupithecia lariciata* ab. *virgata*. ♂. Type.
 Fig. 3. *Eupithecia satyrata* ab. *trilineata*. ♂. Type.
 Fig. 4. *Chloroclystis rectangulata* ab. *effusa*. ♀. Type.
 Fig. 5. *Eupithecia icterata* ab. *goodsoni*. ♂. Type.
 Fig. 6. *Eupithecia extensaria* ssp. *occidua* ab. *albescens*.
 Fig. 7. *Perizoma albulata* ab. *albomedia*.
 Fig. 8. *Plemyria rubiginata* ab. *albovittata*. ♂. Type.
 Fig. 9. *Xanthorhoe munitata* ab. *defasciata*.
 Fig. 10. *Epirrhoe alternata* ab. *confusa*.
 Fig. 11. *Xanthorhoe fluctuata* ab. *costijuncta*. ♀. Type.
 Fig. 12. *Lampropteryx suffumata* ab. *edentata*. ♂. Type.
 Fig. 13. *Epirrhoe tristata* ab. *demarginata*.
 Fig. 14. *Ochyria designata* ab. *costimacula*. ♀. Type.
 Fig. 15. *Xanthorhoe montanata* ab. *reticulata*. ♀. Type.
 Fig. 16. *Hydriomena furcata* ab. *prouti*. ♂. Type.
 Fig. 17. *Euphyia rubidata* ab. *coarctata*. ♀. Type.
 Fig. 18. *Mesoleuca albicillata* ab. *rectangulata*. ♂. Type.
 Fig. 19. *Hydriomena furcata* ab. *mirabilis*. ♀. Type.
 Fig. 20. *Euphyia unangulata* ab. *effusa*. ♀. Type.
 Fig. 21. *Hydriomena ruberata* ab. *bivirgata*.
 Fig. 22. *Biston betularia* ab. *semivirgata*. ♂. Type.
 Fig. 23. *Biston betularia* ab. *suffusa*. ♀. Type.
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basal area is also very dark. The subterminal line is very distinct, the wavy lines are faint, and the ground colour nearly white. On the hind wing the postmedian line is distinct and just external to it is a conspicuous broad pale band.

Xanthorhoë montanata Schiffermüller ab. **reticulata** ab. nov. (Fig. 15.)

On the fore wing the median area is filled in with wavy lines; in the space between the basal and antemedian lines is a band formed of wavy lines giving the insect a reticulated appearance. Near the margin there are three well marked parallel lines, the outermost dentated on its inner aspect, and internal to these is a thin dark line along the termen. On the hind wing near the margin there are two parallel wavy lines and external to them is a dark band dentated on its inner aspect, and there is also a thin dark marginal line.

Type ♀: Wrotham, 28.vi.1932, J. Juby. Rothschild coll.



Xanthorhoë spadicearia Schiffermüller ab. **coarctata** ab. nov.

The median band on the fore wing is narrow.

Type ♀ : Braemar, Aberdeenshire, 1907, Bright. Rothschild coll.

Ochyria designata Hufnagel ab. **costimacula** ab. nov. (Fig. 14.)

The median band is reduced to a large dark mark on the costa.

Type ♀ : Epping Forest, Essex, 1899, O. C. Goldthwait. (Bright coll.) Rothschild coll.

Calostigia multistrigaria Haworth ab. **obscura** ab. nov.

The ground colour of both fore and hind wings is uniformly smoky grey; the median band and the subterminal band are obscured, but visible; the other markings are almost invisible.

Type ♂ : Gibside, Durham, 1906. (Dewar coll.) Cockayne coll.

Paratype ♂ : Ballaugh, Isle of Man, 15.ii.1905, Cassal. L. B. Prout coll.

This is not so dark as ab. *nubilata* Tutt, nor has it the pale dots internal and external to the median area and near the margin of the fore wing, and near the margin of the hind wing.

Lampropteryx suffumata Schiffermüller ab. **edentata** ab. nov. (Fig. 12.)

On the fore wing the postmedian line is much smoother in its curves than usual, the large double toothed projection is much less prominent and the teeth are absent, the indentation just above it is also absent or nearly absent. The ground colour is dark and the white transverse stripes bordering the basal and median areas are very conspicuous.

Type ♂ : North Wales, bred 2.v.1907. (Bright coll.) Rothschild coll.

Paratype ♂ : North Wales, 25.iv.1907. (Bright. coll.) Rothschild coll.

Coenotephria berberata Schiffermüller ab. **deleta** ab. nov.

The basal line is present, but the thin line internal to and parallel with it is absent; the antemedian and postmedian lines are present, but the lines in the median area parallel with them are absent; thus there are three single lines instead of three pairs of lines.

Type ♀ : Suffolk, 1902. Cockayne coll.

Paratype ♀ : Bury, Suffolk, bred 1903. (Gibbs coll.) Rothschild coll.

Coenotephria derivata Schiffermüller ab. **costijuncta** ab. nov.

The antemedian line is united by a broad dark band along the costa with the dark mark, which forms the upper part of the postmedian line.

Type ♂ : Ashridge, Herts., bred 8.iv.1946 by E. A. Cockayne.

Coenotephria derivata Schiffermüller ab. **nigrofasciata** ab. nov.

There is a broad dark band running longitudinally from the antemedian to the postmedian line and occupying the anterior half of the median area, from the costa to nervure 4, and there is another band in the median area powdered with black scales running along the inner margin.

Type ♀ : Cranleigh, Surrey, 1906, F. Pennington. Cockayne coll.

Euphyia unangulata Haworth ab. **effusa** ab. nov. (Fig. 20.)

On the fore wing the median band is unusually narrow; the parts normally white are cream coloured; the subterminal line is very dark and ill defined and on its inner side it encroaches on the light area outside

the median band and runs inwards along the nervures; the faint dark transverse line just outside the median band is absent. The ground colour of the hind wing is cream and the subterminal line is broad and ill defined on its inner side.

Type ♀: Hants, bred 1906 by C. R. N. Burrows. Burrows coll.

Euphyia rubidata Schiffermüller ab. **coarctata** ab. nov. (Fig. 17.)

The median area is about half the normal width and is bounded externally by a complete black line from the costa to the inner margin.

Type ♀: Loc. incog. 1879. (Waring coll.) Rothschild coll.

Ecliptopera silaceata Schiffermüller ab. **melaleuca** ab. nov.

The ground colour is pure white instead of cream colour and the markings are intensely black.

Type ♂: Aston Hills, Bucks., 6.v.1945, A. L. Goodson. Cockayne coll.

Mesoleuca albicillata Linnaeus ab. **rectangulata** ab. nov. (Fig. 18.)

The dark basal area is larger than normal and the dark subapical mark on the costa is rectangular and much longer than usual so that the white space between them is much reduced; the nervures from the postmedian row of dots as far inwards as the end of the subapical mark are darkened forming a row of short lines; in other respects it is normal.

Type ♂: Folkestone, bred 1882 by Blackell. R. Adkin coll.

Epirrhoë tristata Linnaeus ab. **demarginata** ab. nov. (Fig. 13.)

The dark markings on the border of the fore wing are greatly reduced, only a faint trace of brown remaining and a little darkening of the nervures; the dark markings on the border of the hind wing are reduced but not to the same extent.

Type ♂: Rannoch, vi.1907, A. E. Gibbs. Rothschild coll.

Allotype ♀: Rannoch, vi.1905, E. A. Cockayne. Cockayne coll.

Epirrhoë alternata Müller ab. **confusa** ab. nov. (Fig. 10.)

The median band of the fore wing is narrow; the border is dark and suffused internally, fading away gradually into the white ground colour shortly before reaching the postmedian line; there are none of the normal reticulations and the dark line just external to and parallel with the postmedian line is absent. On the hind wing the basal part is dark as far out as the postmedian line and the marginal area is similar to that of the fore wing. The aberration has a dark smoky suffused appearance.

Type ♂: York, E. G. Pether. Cockayne coll.

Paratypes 2 ♂♂: 1 ♂ Loc. incog. Sale Stevens 1900. Christy coll. 1 ♂ Isle of Lewis, 1887, McArthur. Rothschild coll. The last belongs to ssp. *obscurata* South.

Perizoma albulata Schiffermüller ab. **albomedia** ab. nov. (Fig. 7.)

The median area is white and entirely without markings; the basal and marginal markings are present.

Type ♂: Shetland, 1907, P. M. Bright. Rothschild coll.

Allotype ♀: Same data.

Paratypes 2 ♀♀: Same data.

Perizoma affinitata Stephens ab. **effusa** ab. nov.

On the fore wing the marginal area has a suffused appearance and is not sharply defined internally fading away into the white, which borders the postmedian line; the thin dark line which normally runs parallel with and just external to the postmedian line is absent.

Type ♀ : S. Devon, 22.v.1911, J. W. Metcalfe. Cockayne coll.

Hydriomena furcata Thunberg. ab. **goodsoni** ab. nov.

The ground colour of the fore wing is dull pale brownish green; the basal line is dark; there is a broad almost completely unicolorous blackish brown median band reaching the discoidal spot, a subterminal band, and a submarginal band, both of the same colour; the border is usually the same colour as the ground.

Type ♂ : Loc. incog. (Bright coll.) Rothschild coll.

Allotype ♀ : Loc. incog. Banks coll.

Paratypes 1♂ 2 ♀♀ : 1 ♂ Watergate, Emsworth, Hants., vii.1897, W. M. Christy: 1 ♀ Loc. incog. Burrows coll.; 1 ♀ Aston Hills, 12.vii.1944, A. L. Goodson. Cockayne coll.

The type is figured, Barrett, Pl. 368. Fig. 1 f.

Hydriomena furcata Thunberg ab. **barretti** ab. nov.

Similar to ab. *goodsoni* except that most of the anterior (costal) half of the pale band external to the median band is clouded with dark brownish green.

Type ♂ : Loc. incog. (H. B. Williams coll.) Cockayne coll.

Allotype ♀ : Loc. incog. (Bond, S. Webb, Willoughby Ellis coll.) Cockayne coll. Paratypes 2 ♂♂, 1 ♀ : 1 ♂ Stone, vii.1885. (Farn. coll.) R. Adkin coll.: 1 ♂ Loc. incog. Burrows coll.: 1 ♀ Kingsdown, 19.vii.1932, J. Juby. Rothschild coll. The allotype is figured, Barrett, Pl. 369. Fig. 1 b.

Hydriomena furcata Thunberg ab. **mirabilis** ab. nov. (Fig. 19.)

The ground colour is whitish suffused with rufous in the distal areas; the basal area has dark transverse lines, the more distal ones more or less fused to form a band; the antemedian line has a V-shaped indentation about a third of the way across the wing; the median area extending from the antemedian line internally to the outer aspect of the subterminal band, which is close to the anal angle, and from the inner margin to nervure 3 is uniformly dull brownish grey; from the proximal end of this an oblique band of the same colour runs to the costa. These bands, and the median area together with the costa enclose an irregular area of the ground colour in the proximal part of which lie six dark spots speckled with whitish and at the distal end is a narrow doubly angulated band first running towards the termen, then away from it, and then towards it again, parallel with the inner aspect of the subterminal band. The border of the termen is dark and in the narrow belt of ground colour between it and the subterminal band are a number of small dark spots. The pattern is unlike that of any other aberration of this species.

Type ♀ : Meltham, Yorks., 3.ix.1903, W. Tunstall. Prout coll.

Hydriomena furcata Thunberg ab. **supercincta** ab. nov.

The ground colour of the fore wing is dull pale greenish white; the basal area is dark and unusually broad; there is a very broad dark

median band; the subterminal line is absent; outside the median area there is a broad band of pale ground colour, the terminal band is dark.

Type ♂ : Meltham, Yorks., 3.ix.1903, W. Tunstall. Prout coll.

Hydriomena furcata Thunberg ab. **prouti** ab. nov. (Fig. 16.)

The ground colour of the fore wing is whitish faintly tinged with greenish brown; there are three equidistant indistinct narrow transverse bands pale greenish brown in colour; at the extreme base is a thin black transverse line; a thin black transverse line, slightly curved with the concavity towards the termen, runs from the subcostal nervure to the median nervure and another thin black line runs obliquely from a point near the costa to the subcostal nervure and then in a curve, with the concavity towards the base, to the median nervure; the second faint transverse band runs just internal to the one and the third transverse band runs just external to the other; there is also an indistinct narrow band of brownish green along the termen; the fringe is chequered. The hind wing is dull greyish brown and is darker than the fore wing.

Type ♂ : Meltham, 1896, Tunstall. Prout coll. B.M. 1939-643.

Hydriomena ruberata Freyer ab. **bivirgata** ab. nov. (Fig. 21.)

The fore wing is pale grey resembling ab. *grisescens* Huene except that the space between the first and second bands, which are grey and inconspicuous, is darkened and forms a conspicuous band, and the subterminal line forms another conspicuous dark band; the apical mark is also dark.

Type ♂ : South Sutherland, 1892. (Salvage coll.) Christy coll.

Allotype ♀ : Borobol, Sutherland, 14.v.1899, W. M. Christy.

Paratype ♂ : Same data.

Hydriomena ruberata Freyer ab. **unilineata** ab. nov.

The fore wing is almost unicolorous pale grey with a thin dark oblique line near the base, a dark mark external to it on the inner margin, and a small dark apical mark; the usual indistinct transverse lines are absent or obsolescent.

Type ♀ : Wallasey, 1895. Cockayne coll.

Hydriomena ruberata Freyer ab. **constricta** ab. nov.

The pale band in the middle of the fore wing is very narrow.

Type ♂ : Isle of Lewis, Hebrides, 1901. (McArthur coll.) Rothschild coll.

Hydriomena ruberata Freyer ab. **nigrocastanea** ab. nov.

The ground colour of the fore wing is uniform dark red brown with the usual markings present but inconspicuous.

Type ♂ : Middlesborough, bred ix.1907, by E. A. Cockayne.

Allotype ♀ : Middlesborough, bred 29.xi.1907, by E. A. Cockayne.

Paratypes 2♂♂ 2♀♀ : 1♂, 4.x.1907; 1♂, 8.x.1907; 1♀, 4.x.1907; 1♀, 29.x.1907, all bred by E. A. Cockayne from Middlesborough eggs sent by J. W. Heslop Harrison.

Hydriomena ruberata Freyer ab. **marginenotata** ab. nov.

This is a grey form like ab. *grisescens* Huene, but with a row of conspicuous black marks along the termen.

Type ♀ : Warrington, 1898, H. Massey.

Eupithecia linariata Fabricius ab. **punctata** ab. nov. (Fig. 1.)

On the fore wing the basal line is reduced to a spot on the costa and the median band is reduced to a central spot and a small mark on the inner margin.

Type ♂ : Brighton, bred vii.1919, T. S. R. Adkin coll.

Eupithecia pulchellata Stephens ab. **guttata** ab. nov.

On the fore wing the ordinary markings are very faint, the median area is slightly paler than the rest of the wing, but the discoidal spot is black and conspicuous. The hind wing is similar, but with a smaller discoidal spot.

Type ♀ : Lydd, Kent, 3.viii.1932, A. J. Bowes. Bowes coll.

Eupithecia satyrata Hübner ab. **trilineata** ab. nov. (Fig. 3.)

The ground colour of the fore wing is unusually pale, but the antemedian and postmedian lines are thick and strongly developed; the median line is distinct, but less conspicuous. On the hind wing the antemedian and postmedian lines are thick and nearly as dark as those of the fore wing; the discoidal spot is distinct on both wings.

Type ♂ : Abbot's Wood, Sussex, 4.vi.1924, R. Adkin. R. Adkin coll.

Eupithecia satyrata Hübner ab. **nigra** ab. nov.

The head, thorax, wings, and abdomen are nearly black with the markings just visible.

Type ♂ : Paisley district, 1902, A. M. Stewart. (Determined by L. B. Prout) Prout coll.

Eupithecia icterata de Villers ab. **goodsoni** ab. nov. (Fig. 5.)

This is a modification of ab. *subfulvata* Haworth. The costa of the fore wing is entirely dark, lacking the usual pale lines. Below the median nervure and on each side of nervure 2 is a longitudinal band of fuscous crossed transversely by pale lines; the wavy submarginal pale line is indistinct and the pale marginal lunules are absent. The hind wing is darker than normal and the usual markings are almost absent.

Type ♂ : Tring, Herts., bred 14.vi.1945 by A. L. Goodson. Cockayne coll.

Eupithecia extensaria Freyer ssp. *occidua* Prout ab. **albescens** ab. nov. (Fig. 6).

The transverse bands are very pale and weakly marked or obsolescent. It is an albinistic form.

Type ♂ : Thornham, Norfolk, bred 25.v.1932 by E. A. Cockayne.
Allotype ♀ : Same data.

Paratypes 1♂, 3 ♀♀ : 1♂, bred 9.v.1932; 1 ♀, bred 28.v.1932; 1 ♀ bred 5.vi.1932; 1 ♀, bred 19.v.1932 by E. A. Cockayne, all from Thornham. Mr. Prout did not think this form identical with ab. *leuca* Dietze from the Illi and Ussuri districts.

Eupithecia abbreviata Stephens ab. **nigra** ab. nov.

Every part of the insect, head, thorax, wings, and abdomen are black with the markings on the wings almost obliterated.

Type ♂ : Tring, Herts., bred 7.iv.1945 by A. L. Goodson.

Allotype ♀ : Brickhill, Bucks., bred 7.iv.1945 by A. L. Goodson.